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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR   | ATTORNEY DOCKET NO.             | CONFIRMATION NO.            |
|---|-------------|------------------------|---------------------------------|-----------------------------|
| 10/600,891  | 06/20/2003  | Glynn Alan Spangenberg | 030266                          | 5908                        |
| 23696 7590 02/12/2008<br>QUALCOMM INCORPORATED<br>5775 MOREHOUSE DR.<br>SAN DIEGO, CA 92121 |             |                        | EXAMINER<br>AKINTOLA, OLABODE   |                             |
|   |             |                        | ART UNIT<br>3691                | PAPER NUMBER                |
|   |             |                        | NOTIFICATION DATE<br>02/12/2008 | DELIVERY MODE<br>ELECTRONIC |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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kascanla@qualcomm.com  
nanm@qualcomm.com

|                              |                                      |   |  |
|------------------------------|--------------------------------------|---|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/600,891 | <b>Applicant(s)</b><br>SPANGENBERG ET AL. |  |
|                              | <b>Examiner</b><br>OLABODE AKINTOLA  | <b>Art Unit</b><br>3691                   |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 December 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chene et al (US 6587768) in view of Carr (US 6968295).

Re claims 1-3, 5, 7-16, 18, 20-25, 27 and 29-32: Chene teaches a method, an apparatus and a machine readable executable instructions for measuring a benefit of a business improvement comprising operations of: automatically receiving, from a vehicle using wireless

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communications, actual performance information detected by at least one vehicle sensor and provided by a vehicle operator (abstract, Figs, col. 1, lines 61-65, col. 4, lines 41-44); storing the actual performance information in a storage device (col. 2, lines 14-16); retrieving the actual performance information (co. 3, lines 11-15). Chene does not explicitly teach providing business improvement to a service business with vehicle, receiving actual performance over a period of time and calculating the benefit of implementing the business improvement by comparing the actual performance information to estimated performance information determined prior to an introduction of the business improvement. Carr teaches providing business improvement to a service business with vehicle, receiving actual performance over a period of time and calculating the benefit of implementing the business improvement by comparing the actual performance information to estimated performance information determined prior to an introduction of the business improvement (summary, col. 32, line 47 thru col. 33, line 7, col. 35, lines 42-45). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Chen to include this feature. One would have been motivated to do this in order to estimate the ROI after the adjustment on a monthly basis for a predetermined period of time.

Re claim 4, 6, 17, 19, 26 and 28: Chene does not explicitly teach NPV and payback period.

Official notice is taken that these two parameters are notoriously old and well known in the art of financial analysis. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Chene and Carr to include NPV and payback period. One would have been motivated to do this as part of traditional financial calculation.

***Response to Arguments***

Applicant's arguments filed 12/18/2007 have been fully considered but they are not persuasive.

In response to applicant's argument that the Chene is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Chene explicitly teaches vehicle maintenance system by capturing vehicle data using wireless means.

Applicant asserts that the present invention compares the actual measured information with *predicted* performance information. Contrary to applicant's assertion that the estimated performance is a predicted performance prior to introduction of the improvement, the originally filed disclosure does not have support for this assertion. In fact, nowhere in the specification is any performance predicted. Section 0012 of the specification reads thus:

[0012] FIG. 1 illustrates a satellite-based wireless communication system widely used in the trucking industry for allowing two-way communications between vehicles and remotely-located entities, such as a fleet management center, family members, governmental authorities, and so on. Although the ideas presented herein for determining benefits to business improvements are described herein with respect to a satellite-based communication system, it should be understood that any other wireless communication system could be used in the alternative, including cellular and PCS terrestrial communications, microwave communications, 802.11 systems, PCMCIA cards, local

infrared or radio frequency systems, and so on. It should also be understood that measuring the benefits of a business improvement as described herein may comprise measuring such things as increased revenues, decreased costs, reduction of overtime hours worked, reduction in the number of employees, an increase in average fuel efficiency, and so on. These benefits may further be used to calculate other benefits, such as an actual return-on-investment of an improvement, an actual net present value of an improvement, an actual total cost of ownership of an improvement, an actual internal rate of return, an actual payback time period, and/or other benefits. Generally, benefits are measured by comparing actual performance information of a business after a business improvement has been introduced, to estimated performance information prior to introduction of the business improvement.

From the specification, it is clear that actual performance is the performance after the improvement while the estimated performance is the performance **before** the improvement.

Carr explicitly teaches the aforementioned limitation at col. 32, lines 53-67 (i.e., “*One embodiment of the description of the adjustments made to the initial settings includes a determination of the energy-usage and costs **after** the adjustments, a model for the energy usage of the systems at the facility 10 after the adjustments (i.e., tune-up), and a comparison of the baseline and after tune-up energy usage by the facility 10*”).

Applicant also argues that Carr does not discuss using actual measured data over a period of time. Examiner respectfully disagrees. Carr explicitly teaches this limitation at col. 33, line 4 and col. 35, lines 42-45.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Summers (US 6408263) teaches traditional financial calculations (NPV, payback period and ROI) (col. 29, lines 63-67)

Tripathi teaches monitoring of vehicle health based on historical information (see figures)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Olabode Akintola whose telephone number is 571-272-3629. The examiner can normally be reached on M-F 8:30AM -5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexander Kalinowski can be reached on 571-272-6771. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Hani M. Kazimi/  
Primary Examiner, Art Unit 3691